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SKYLAB

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- B. Number of investigation: #357
- C. Period covered: Monthly progress report for November, 1973.
- D. Contract number: 9-13274
- E. Principal Investigations Management Office, Lyndon B. Johnson Space Center
- F. Technical Monitor name: Martin Miller TF6
Johnson Space Center
Earth Observation Division
Houston, Texas 77058
Phone 713-483-6451
- G. Principal Investigator and sponsoring institution: Jack G. Quade
Mackay School of Mines
University of Nevada
Reno, Nevada 89502
Phone 702-784-6618
- H. Type of report: Monthly Progress Report for November, 1973

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INVESTIGATION Monthly Progress Report,
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I. Overall Status:

1. A field examination of the "Mineral Deposit" in White Pine County, Nevada, reported by Dr. Mead L. Jensen has been completed. This area which is part of our primary test-site was covered by a Rb-57 (mission #239) flown on our behalf, on June 5, 1973, and by SL-2 along track #20 on May 30th. Both sets of data were compared with existing gravity, aeromagnetic maps and the USGS geologic map of White Pine County by Richard K. Hose and Clarke Blake, Jr., 1970.

The statements made in the numerous press releases that generally relate this discovery to Skylab data are: "The light colored areas amid the dark colored volcanics are suggestive of limestone" and "obviously, therefore the volcanics are very thin in these areas" and as a result "the magnetic anomaly that surrounds this area isn't due to the volcanics but is due to something underneath the surface ... something from below has given rise to mineralization in the limestone rock".

In an attempt to clarify these statements a mylar overlay of the aeromagnetic map by J. E. Carlson and D. R. Mabey, 1963 was made at a scale of 1:150,000 so as to conform to the geologic map of White Pine County. From these data it can be seen that the magnetic highs are associated with the Tertiary, older volcanic (Tovr), while a magnetic low occurs over the Quaternary sedimentary rocks (Q), and Tertiary younger sedimentary and volcanic rocks (Tys). The magnetic anomalies are not associated with Arcturus Limestone Formation (Pa).

The field trip revealed that approximately half of the light colored rocks amid the darker volcanics are not limestones, but (Q) and (Tys) rocks, very similar in color to the limestone (Pa). Because of the similarities in color and tone individual rock types could not be discriminated using skylab imagery. Some bedding and preferred vegetation made identification of the limestone (Pa) possible on the color IR and color ectachrome taken during mission #239. However, nothing new can be said about the discrimination of these individual geologic units or their time and space relationships that has not already been mapped.

Three days in the field photographing, sampling, and walking contacts, with special emphasis on the Arcturus Limestone Formation (Pa), revealed no visible evidence of alteration or mineralization.

A mylar overlay of the aeromagnetics and a portion of the White Pine County map have been sent to Johnson Space Center, PLMO Office, Dr. David Amsbury TF/6, Houston, Texas, 77058.

2. We have received, reviewed and reported on most of the RB-57 imagery from the August 29th and September 13th overflights. The color ectachrome 2445 from the 29th flight is the only imagery not yet delivered.

3. We have received, reviewed and reported on the SL-2 imagery from the S-190 camera system, along track #20 on May 30th and track #6 on June 3rd.

4. A five day trip was made to Stanford, AMES and JPL to confer with Dr. Lyon and Dr. Goetz about aircraft data, groundbased measurements, and Skylab data formats. Most of the JPL meeting involved discussions about the geothermal groundbased experiment. As a result, half of the cost and the time was charged to the JPL contract.

J. Expected accomplishments for the next reporting period:

1. Work will continue until all of the imagery, geophysical, and geological maps are on the same scales.

2. Some select frames from the S-190 and the RB-57 will be sent out to private contractors to make enlarged prints.

3. Some annual leave will be taken at Christmas time.

K. Travel:

1. No travel is contemplated during December.